

IN THE CLAIMS

Please amend the claims as follows:

1 (Currently Amended). A fuel cell system comprising:

a liquid fuel cell having an anode, a cathode and an electrolyte membrane put therebetween;

a fuel supply unit supplying liquid fuel to the anode;

an air supply unit supplying air to the cathode; and

a heat exchanger exchanging heat between the liquid fuel supplied by the fuel supply unit to the anode and an exhaust exhausted from the liquid fuel cell, wherein the exhaust is exhausted from the anode or both the cathode and the anode.

2-4 (Canceled).

5 (Previously Presented). The fuel cell system of claim 1, wherein:

the fuel supply unit further comprises a mixing container mixing the liquid fuel and the exhaust so as to form a liquid mixture in advance.

6 (Canceled).

7 (Previously Presented). The fuel cell system of claim 1, wherein:

the liquid fuel cell is a direct methanol fuel cell.

8 (Previously Presented). A fuel cell system comprising:

a liquid fuel cell having an anode, a cathode and an electrolyte membrane put therebetween;

a fuel supply unit including a mixing container mixing liquid fuel and an exhaust exhausted from the liquid fuel cell so as to form a liquid mixture, the liquid mixture being supplied to the anode;

an air supply unit supplying air to the cathode; and

a heat exchanger connected to the mixing container so as to exchange heat between ambient air and the liquid mixture.

9 (Previously Presented). The fuel cell system of claim 8, wherein:

the mixing container is configured so that the exhaust passes through the liquid mixture housed in the mixing container, such that gas fractions in the exhaust are separated.

10 (Previously Presented). The fuel cell system of claim 8, further comprising:

a second mixing container communicated with the mixing container wherein the liquid mixture is supplied from the second mixing container to the anode.

11 (Previously Presented). The fuel cell system of claim 8, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the anode.

12 (Previously Presented). The fuel cell system of claim 8, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode.

13 (Previously Presented). The fuel cell system of claim 8, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode and the anode.

14 (Canceled).

15 (Previously Presented). The fuel cell system of claim 8, wherein:

the liquid fuel cell is a direct methanol fuel cell.

16 (Previously Presented). A fuel cell system comprising:

a liquid fuel cell having an anode, a cathode and an electrolyte membrane put therebetween;

a fuel supply unit including a mixing container mixing liquid fuel and an exhaust exhausted from the liquid fuel cell so as to form a liquid mixture, the liquid mixture being supplied to the anode;

an air supply unit supplying air to the cathode;

a heat exchanger exposed to an ambient air; and

a circulation unit circulating the liquid mixture between the mixing container and the heat exchanger so as to exchange heat between the ambient air and the liquid mixture.

17 (Previously Presented). The fuel cell system of claim 16, wherein:

the mixing container is configured so that the exhaust passes through the liquid mixture housed in the mixing container, such that gas fractions in the exhaust are separated.

18 (Previously Presented). The fuel cell system of claim 16, further comprising:

a second mixing container communicated with the mixing container wherein the liquid mixture is supplied from the second mixing container to the anode.

19 (Previously Presented). The fuel cell system of claim 16, further comprising:  
a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the anode.

20 (Previously Presented). The fuel cell system of claim 16, further comprising:  
a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode.

21 (Previously Presented). The fuel cell system of claim 16, further comprising:  
a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode and the anode.

22 (Canceled).

23 (Previously Presented). The fuel cell system of claim 16, wherein:  
the liquid fuel cell is a direct methanol fuel cell.